

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-47 (Cancelled)

48. (Original) A compound multi-port vacuum pump comprising first, second and third pumping sections, a first pump inlet through which fluid can enter the pump and pass through each of the pumping sections towards a pump outlet, a second pump inlet through which fluid can enter the pump and pass through only the second and third pumping sections towards the outlet, an optional third pump inlet through which fluid can enter the pump and pass through only the third pumping section towards the outlet, and a fourth inlet through which fluid can enter the pump and pass through only part of the third pumping section towards the outlet.

49. (Previously Presented) The pump according to claim 48 wherein at least one of the first and second pumping sections comprises at least one turbo-molecular stage.

50. (Previously Presented) The pump according to claim 48 wherein both of the first and second pumping sections comprises at least one turbo-molecular stage.

51. (Previously Presented) The pump according to claim 48 wherein the third pumping section is positioned relative to the second and forth pump inlets such that fluid passing therethrough from the second pump inlet follows a different path from fluid passing therethrough from the fourth pump inlet.

52. (Previously Presented) The pump according to claim 51 wherein the third pumping section is positioned relative to the second and forth pump inlets such that fluid passing therethrough from the forth pump inlet follows only part of the path of the fluid passing therethrough from the second pump inlet.

53. (Previously Presented) The pump according to claim 48 wherein the third pumping section comprises at least one molecular drag stage.

54. (Previously Presented) The pump according to claim 53 wherein the third pumping section comprises a multi-stage Holweck mechanism with a plurality of channels arranged as a plurality of helixes.

55. (Previously Presented) The pump according to claim 54 wherein the Holweck mechanism is positioned relative to the second and forth pump inlets such that fluid passing therethrough from the forth pump inlet follows only part of the path of the fluid passing therethrough from the second pump inlet.

56. (Previously Presented) The pump according to claim 48 wherein the fluid pumping section comprises at least one Gaede pumping stage and/or at least one aerodynamic pumping stage.

57. (Previously Presented) The pump according to claim 54 wherein the third pumping section comprises at least one Gaede pumping stage and/or at least one aerodynamic pumping stage, and wherein the Holweck mechanism is positioned upstream from said at least one Gaede pumping stage and/or at least one aerodynamic pumping stage.

58. (Previously Presented) The pump according to claim 57 wherein the Holweck mechanism is positioned relative to the second and fourth pump inlets such that fluid entering the pump from the fourth pump inlet does not pass therethrough.

59. (Previously Presented) The pump according to claim 56 wherein said at least one aerodynamic pumping stage comprises at least one regenerative stage.

60. (Previously Presented) The pump according to claim 57 wherein the third pumping section comprises at least one aerodynamic pumping stage and wherein, in use, the pressure of the fluid exhaust from the pump outlet is equal to or greater than 10 mbar.

61. (Previously Presented) The pump according to claim 60 wherein the third inlet is positioned such that fluid entering the pump therethrough passes through, of said sections, only the third pumping section towards the pump outlet.

62. (Previously Presented) The pump according to claim 61 wherein the fluid entering the pump through the third inlet passes through a greater number of stages of the third pumping section than fluid entering the pump through the fourth inlet.

63. (Previously Presented) The pump according to claim 48 comprising a drive shaft having mounted thereon at least one rotor element for each of the pumping section.

64. (Previously Presented) The differentially pumped vacuum system comprising a plurality of chambers and a pump according to claim 48 for evacuating each of the chambers.